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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,068	01/21/2005	Haydn N.G. Wadley	00807-03	7584
34444 7590 08/08/2007 UNIVERSITY OF VIRGINIA PATENT FOUNDATION 250 WEST MAIN STREET, SUITE 300 CHARLOTTESVILLE, VA 22902			EXAMINER AUSTIN, AARON	
			ART UNIT 1775	PAPER NUMBER
			MAIL DATE 08/08/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.		Applicant(s)	
	10/522,068		WADLEY, HAYDN N.G.	
	Examiner		Art Unit	
	Aaron S. Austin		1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) 36-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/25/07, 5/9/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group I, claims 1-35 in the reply filed on 5/9/07 is acknowledged. The traversal is on the ground(s) that the contribution over the prior art is provided. This is not found persuasive because this fails to differentiate the present claims from the prior art cited in the restriction requirement. Further, the argument fails to address the argument that the special technical feature is not commonly shared between the restricted groups.

The requirement is still deemed proper and is therefore made FINAL.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it has been submitted as the front sheet of International Publication Number WO 2004/011245 rather than a single paragraph on a separate sheet. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 5, 10, 15, and 20 recite the limitation "said cellular housings" in line 1. There is insufficient antecedent basis for this limitation in the claim. In particular, it is not clear as to whether the limitation refers to the cellular housings of the first array, the second array, or some combination thereof.

Claims 6, 9, 11, 14, 16, 19, 21, and 24 recite the limitation "or other non-limiting arrangements" in the final line of the claims. This limitation is structurally indefinite and thus fails to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6, 7, 8, 9, 11, 12, 13, 14, 16, 17, 18, 19, 21, 22, 23, and 24 recite the limitation "said cellular cores" in line 1. There is insufficient antecedent basis for this limitation in the claim. In particular, it is not clear as to whether the limitation refers to the cellular cores of the first array, the second array, or some combination thereof.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-9, 20-32, and 34-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Geyer et al. (US Patent No. 4,453,367).

Geyer et al. teach a structure comprising a first array of cellular housings and a plurality of cellular cores in the cellular housings (Fig. 3).

Regarding claims 3 and 4, first and second panels are disposed on the first array in positions distal from each other (Fig. 4).

Regarding claims 5 and 20, the cellular housing may have a hexagonal, rectangular, or other shape (column 5, line 42).

Regarding claims 6 and 21, the cellular core may be tetrahedral/rectangular or of other non-limiting arrangements (column 5, line 42).

Regarding claims 7, 8, 22, 23, the cellular cores are hollow and thus porous (Fig. 2).

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Regarding claims 9 and 24, the cellular cores comprise polymer cast into the cellular housing (column 3, lines 33-37).

Regarding claims 25 and 29, the panels may be bonded by adhesive to the first array (column 3, lines 56-59).

Regarding claims 26, 27, 28, 30, 31, and 32, the claims represent intended use.

Regarding claims 34 and 35, the cellular housings and cores may comprise plastic, metals, or other materials (column 3, lines 35-37).

Claims 1-35 are rejected under 35 U.S.C. 102(a and e) as being anticipated by Colvin (US Patent No. 6,418,832).

Colvin teaches a structure comprising a first array of cellular housings and a plurality of cellular cores 45 in the cellular housings (Fig. 2 and Fig. 5A & 5B).

Regarding claim 2, a second array of a plurality of cellular housings and at least one cellular core in the cellular housings (Fig. 2 and Fig. 5A & 5B).

Regarding claims 3 and 4, first and second panels are disposed on the arrays 74 and 77 in positions distal from each other (Fig. 4).

Regarding claims 5, 10, 15, and 20, the cellular housing may have a hexagonal, rectangular, conical, or other polygonal shape (column 4, lines 13-39).

Regarding claims 6, 11, 16, and 21, the cellular core may include spherical portions (Fig. 9).

Regarding claims 7, 8, 9, 12, 13, 14, 17, 18, 19, 22, 23, and 24 the cellular cores may include porous foams (column 5, lines 11-17).

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Regarding claims 25, 29, and 33, the panels may be bonded by adhesive to the arrays (column 3, line 65).

Regarding claims 26, 27, 28, 30, 31, and 32, the claims represent intended use.

Regarding claims 34 and 35, the cellular housings and cores may comprise plastics other pliable materials (column 4, lines 3-5, column 5, lines 11-60).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 10-19, 33, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Geyer et al. (US Patent No. 4,453,367).

Geyer et al. teach a structure comprising a first array of cellular housings and a plurality of cellular cores in the cellular housings as described above (Fig. 3).

Greyer et al. teach the cellular housing may have a hexagonal, rectangular, or other shape (column 5, line 42). They do not specify the shape may be triangular or tubular.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose a triangular or tubular shape as they teach other shapes are possible and since it has been held that the configuration was a matter of choice which a person of ordinary skill in the art would have found obvious absent

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persuasive evidence that the particular configuration claimed was significant. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Regarding claim 2, Geyer et al. do not teach a second array of cellular housings. However, it would be obvious to one of ordinary skill in the art to stack a second panel including a second array on top of the first as structural materials to provide further architectural support. In addition, it would have been obvious to one having ordinary skill in the art at the time the invention was made to duplicate panels for further structural support, since it has been held that mere duplication of essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Regarding claims 11 and 16, the cellular core may be tetrahedral/rectangular or of other non-limiting arrangements (column 5, line 42).

Regarding claims 12, 13, 17 and 18, the cellular cores are hollow and thus porous (Fig. 2).

Regarding claims 14 and 19, the cellular cores comprise polymer cast into the cellular housing (column 3, lines 33-37).

Regarding claim 33, the panels may be bonded by adhesive to the first array (column 3, lines 56-59). It would be obvious to one of ordinary skill in the art in affixing two or more panels for a reinforced structure as argued above to use an adhesive.

Regarding claim 35, the cellular housings and cores may comprise plastic, metals, or other materials (column 3, lines 35-37). Thus it would be obvious to one of ordinary skill in the art to form the housings of composites of plastic or metal as "other

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materials" may be interpreted to include composites of those same materials as are taught.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamagishi et al. teach inclusion of polyhedral formations in structural formations to reduce impact-caused vibrations.

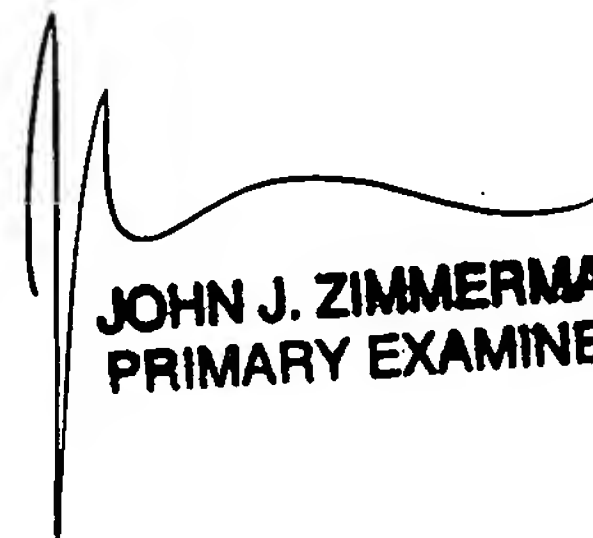
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron S. Austin whose telephone number is (571) 272-8935. The examiner can normally be reached on Monday-Friday: 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ASA



JOHN J. ZIMMERMAN
PRIMARY EXAMINER